

# ES&H manual

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## Environment, Safety, and Health

### Volume II

#### Part 21: Transportation

### Document 21.3 Vehicle Operations and Traffic

(Formerly H&SM Chapter 35)

**Recommended for approval by the ES&H Working Group**

**Approved by:** Glenn L. Mara  
Deputy Director for Operations

**New document or new requirements**

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- ☐ New document  
☒ Major requirement change

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## 21.3

### Vehicle Operations and Traffic

#### 1.0 Introduction

The use of vehicles (including motorized carts and bicycles) around the LLNL Livermore site and Site 300 is potentially hazardous; therefore, LLNL has instituted requirements to protect vehicle occupants, bicyclists, and pedestrians. To increase the safety of roadways and pathways, all employees (motor vehicle operators, bicycle riders, and pedestrians) shall comply with these requirements and the provisions of the California Vehicle Code (CVC) when operating:

- Government vehicles [i.e., LLNL-furnished vehicles leased from the General Services Administration (GSA) or otherwise owned, rented, or leased by LLNL].
- Privately owned vehicles (including bicycles, motorcycles, and scooters).
- Worker-rented vehicles.

The CVC, while not legally binding onsite, shall be considered as a source document and is enforceable through LLNL's Protective Force Division. In addition, drivers shall always wear seat belts and operate vehicles at a speed that is reasonable, safe, and proper for the weather, traffic, and road conditions. The maximum speed limit at the LLNL Livermore site is 25 miles per hour (mph) and 35 mph at Site 300, unless otherwise posted. The maximum speed limit in parking lots and alleys is 15 mph.

Speeding and moving traffic infractions are serious safety concerns. Anyone who violates either the CVC or Laboratory requirements while onsite is subject to citation by the Protective Force Division and to corrective action by LLNL management. Drivers who are cited for traffic violations offsite while on official business are held personally responsible for the citation and may also be subject to disciplinary action by LLNL management. Government vehicles are to be used for official business only, as outlined in Section 3.2.

The provisions of the CVC and the Laboratory's requirements for pedestrians, traffic safety, and parking apply to all employees, contractors, vendors, and guests who use Laboratory, private, or rental vehicles at the LLNL Livermore site, Site 300, or offsite (These provisions and requirements also apply to private vehicles when used offsite for official business).

The requirements for all vehicles are based on the CVC, whereas those for commercial vehicles are based on the Department of Transportation (DOT) 49 CFR (various sections), "Federal Motor Carrier Safety Regulations," and the CVC. These requirements

are further supplemented by Laboratory traffic requirements as identified in this document and *Onsite Packaging and Transportation Safety Standard* (see Section 6.0).

The Traffic Safety Committee prepares draft requirements for approval and reviews onsite traffic safety issues. Information for the Laboratory from the Traffic Safety Committee can be found at the following Internet address:

<http://www-r.llnl.gov/traffic-safety/>

This site also provides a direct link to the CVC.

## **2.0 Hazards**

Operating motor vehicles and bicycles can result in accidents, bodily harm, and/or death, resulting from the collision. In addition, damage to Laboratory and private property can result from accidents.

## **3.0 Controls for Safely Operating Vehicles and Bicycles**

### **3.1 General**

Individuals who operate their own motor vehicle, a Laboratory motor vehicle, or a rental vehicle on or off LLNL property shall have on their person a valid, current driver's license from their state of residence and are responsible for operating vehicles in accordance with the applicable vehicle code.

Seat belts shall be used by the driver and all occupants of a motor vehicle. The driver shall ensure that occupants wear their seat belts.

**Note:** Drivers operating a powered industrial truck shall always wear seat belts if they are provided.

### **3.2 Government Vehicles**

**Use of Government Vehicles.** Government vehicles are to be used for official business only.

An employee may use a government vehicle to transport another employee with a minor injury or illness when requested to do so by the work supervisor. See Document 10.1, "Occupational Medical Program" section 9.4, in the *ES&H Manual* for additional information.

**Personnel Requirements.** Smoking is prohibited in all government-owned vehicles.

Individuals operating government vehicles shall be at least 18 years old, be employed by the Laboratory, and have a valid driver's license. Supplemental-labor workers may drive government vehicles after obtaining a government driver's license from the Fleet Management Group. Guests are not allowed to operate government vehicles.

**Inspections.** All government vehicles shall be inspected regularly by Fleet Management personnel. Vehicle Center representatives are responsible for ensuring that vehicles assigned to their areas are made available for inspection. Any vehicle that is more than 30 days overdue for inspection may be removed from service until it can be checked.

Newly purchased vehicles (or vehicles that have been repaired or were involved in an accident) shall be inspected by Fleet Management before operation. If the inspection indicates an unsatisfactory condition, the vehicle shall not be operated until repaired. Under no circumstances shall an unsafe vehicle be operated.

Drivers are responsible for visually inspecting a vehicle before operation to ensure that it is safe. For general onsite use, this inspection should include an evaluation of the following:

- Seat belts
- General condition of the tires
- Braking capability (test brake pedal)
- Fuel supply
- Mirrors (for proper adjustment)

For offsite use, this inspection should include all the items listed above for onsite use, as well as the following:

- Directional signals, headlights, taillights, and brake lights
- Spare tires and accessories
- Windshield wipers and washer fluid

An unsafe vehicle shall be reported to the Fleet Management Group Office immediately and removed from service.

**Offsite Use.** Government vehicles authorized for offsite use shall have:

- Government license plates. (However, rental vehicles used for official business may have standard state-issued license plates.)

- A spare tire and tools to change the tire.
- A telephone number to call in case the vehicle breaks down during normal business hours or after hours.
- Fire extinguishers, if required for the commodity being transported.
- Appropriate inspection forms and shipping documentation, if required.

It is recommended that all government vehicles carry emergency flares or reflective devices.

**Gas or Electric Carts.** Carts are licensed for onsite use only. When provided, seat belts shall be used by the driver and all occupants of a cart.

### 3.3 Commercial Motor Vehicles

Some vehicles are classified as commercial motor vehicles (CMVs) because of their weight, configuration, or the materials they transport.

**Personnel Requirements.** Individuals required by their management to operate (or to be ready to operate) CMVs for LLNL shall:

- Have a valid commercial driver's license (CDL), issued by their state of residence, with the appropriate endorsements for the class of vehicle to be operated and the type of cargo to be carried.
- Pass a DOT preassignment drug test (if hired after 1 January 1995).
- Take course PA0005 (Alcohol and Drug Testing for CDL Holders) and sign a receipt indicating that they have received the booklet entitled "LLNL Informational Materials" upon completing the course. Other training for CDL holders and their supervisors is specified in Section 3.12.

Commercial driver's license holders employed by LLNL shall enroll in the Laboratory's Controlled Substance and Alcohol Testing Program, as required by federal regulations, and have a Driver's Qualification File on record with the Business Services Department. Business Services publishes an up-to-date list of personnel authorized to operate CMVs. Individuals who are not on this list shall not operate CMVs.

Workers involved in the transport of explosives are subject to additional requirements specified in Document 21.2, "Onsite Hazardous Materials Packaging and Transportation Safety Manual," in the *Environment, Safety, and Health (ES&H) Manual*. For more information on personnel requirements, contact the Packaging and Transportation Safety (PATs) Program Office.

**Procurement.** Prior to placing an order, Fleet Management should coordinate the purchase of all CMVs with the PATS Program Office to ensure compliance with applicable DOT regulatory requirements.

**Inspections.** All CMVs operated by or for LLNL shall be inspected in accordance with the requirements in 49 CFR 396. Before operating a CMV, the driver shall ensure the vehicle is in safe operating condition and verify that the LLNL Vehicle Inspection Report Form (LL-6335) completed by the previous driver is in the vehicle. If any defects or deficiencies are noted, the driver shall certify that the repairs are made by signing the report form, and the mechanic shall certify that the repair is complete. At the end of each day the vehicle is operated, the driver shall complete Form LL-6335 and leave it inside the cab or in the driver's area of the vehicle. CMVs shall also be inspected annually by a certified mechanic in accordance with the requirements in 49 CFR 396.17. Contact the drivers qualification coordinator for information about licensing requirements, and contact the PATS Program Office for information about CMV policy.

### 3.4 Powered Industrial Trucks

Powered industrial trucks, such as a fork trucks, shall be operated in accordance with Document 15.4, "Powered Industrial Truck Safety," in the *ES&H Manual*. See Section 4.0 for information about the off-pavement use of powered industrial trucks.

### 3.5 Onsite Traffic Violations

Protective Force Division officers cite operators (regardless of employment status) who violate onsite traffic and parking regulations. Violations are assigned points as follows:

- Moving violations are assigned a minimum of two points. However, the Traffic Safety Committee may assign more than two points if the violation caused bodily harm or substantial property damage, involved the use of alcohol or illegal drugs, placed lives in danger, or is viewed as especially grievous.
- Improper use of pathways (i.e., bypassing of bollards on a pathway or elsewhere) are assigned two points (see Section 3.6).
- Parking violations related to the following are assigned two points.
  - Safety (e.g., blocking roadways, fire lanes, service lanes, bike and pedestrian lanes, posted "No Parking" areas, red curbs, and fire hydrants).
  - Security setbacks (i.e., within the required open area on either side of a security barrier).
  - Handicapped-marked spaces.
- Minor parking violations are assigned one point.

### 3.5.1 Worker Appeal of Onsite Traffic Citations

Traffic citation appeals are reviewed by the Traffic Safety Committee chairperson and designated senior management representative of the Deputy Director for Operations. Individuals may appeal a citation by providing all facts to a subcommittee of the Traffic Safety Committee within 30 days of the citation date. Appeals of driving suspension are handled in accordance with Section H (Grievances and Administrative Review) of the *LLNL Personnel Policies and Procedures Manual*.

### 3.5.2 Corrective Actions for Violations

LLNL takes corrective action when an employee's points for both parking and moving violations within a 12-month period exceed the limits specified below. (Corrective action shall be carried out in accordance with Section E.II of the *LLNL Personnel Policies and Procedures Manual*.) Laboratory employees are subject to the following disciplinary actions, as a minimum:

- **Any onsite citation.** The employee, his or her associate director (AD), and Staff Relations receive a letter from the Safeguards and Security Protective Force Division leader informing them of the citation. The AD notifies the worker that additional onsite violations could initiate written corrective action and that his or her onsite driving privileges could be placed on probation.
- **Four points within a 12-month period.** The employee, his or her AD, and Staff Relations receive a letter from the Protective Force Division informing them that four points have been accumulated. The AD initiates corrective action, which shall include a written note stating that the employee is being placed on probation for 12 months and that his or her onsite driving privileges can be suspended if additional points are accrued.
- **Six or seven points within a 12-month period.** The employee, his or her AD, and Staff Relations receive a letter from the Protective Force Division informing them that six or seven points have been accumulated. The AD initiates action to suspend the person's onsite driving privileges for 3 months (or more) and to have his or her badge marked accordingly. The employee then shall complete course HS5600-CBT (Defensive Driving) to earn reinstatement of onsite driving privileges by the end of the suspension period.
- **Eight or more points within a 12-month period.** The employee, his or her AD, and Staff Relations receive a letter from the Protective Force Division informing them that eight or more points have been accumulated. The AD initiates action to suspend the person's onsite driving privileges for 12 months (or more) and to have his or her badge marked accordingly.

Nonemployees (i.e., contractors, vendors, guests) may have their onsite driving privileges suspended for violating LLNL's traffic requirements.

### 3.6 Pathways

Pathways are to be used only by pedestrians and bicycles. No private motor vehicles of any kind are permitted on pathways. Improper use of pathways by motor vehicles has serious safety implications for pedestrians and bicyclists, and such vehicle infractions are assigned a two-point penalty (see Section 3.5). The only acceptable use of a pathway by a motor vehicle is use by service or emergency vehicles in authorized Laboratory business when use of a roadway is unfeasible.

Bypassing bollards with a motor vehicle on pathways or elsewhere is strictly prohibited. In addition, when bypassing of bollards results in damage to landscaping or other property damage, the vehicle operator's directorate shall be responsible for the cost of repair.

### 3.7 Onsite Parking

All nongovernment motor vehicles shall be parked in designated parking spaces only and may not overlap adjacent spaces or block the flow of traffic. Backing into diagonal spaces is prohibited, and backing into perpendicular spaces is not recommended. No vehicle shall park within 10 ft of the low-security side of a security fence. Vehicles that exceed the height of the security barrier shall not be parked within ten feet of the barrier on the high-security side. Individuals who violate onsite parking requirements are subject to citation by the LLNL Protective Force Division based on the provisions of the CVC.

Privately owned motor vehicles shall not be parked onsite overnight unless for official Laboratory business. Privately owned vehicles in violation of the Laboratory overnight parking requirements are subject to being towed offsite at the owner's expense.

Parking is permitted in other areas for government vehicles, LLNL service vehicles (e.g., plumbing repair vehicles), and privately owned vehicles that have special parking permits.

**Restricted Parking Zones.** Restricted parking zones are designated as follows:

- **Blue Curb**—Parking for individuals who are experiencing medical conditions which limit physical activity. Requires permits issued by either the California Department of Motor Vehicles (DMV) or LLNL Health Services Department (HSD). Individuals with handicap permits issued by the DMV do not require an HSD-issued permit. (See Special Parking Permits below.)

- **Commuter Passes**—Commuter passes are for use by carpools and vanpools only. Carpool and vanpool stalls are reserved for permit holders from Monday through Friday, 6:45 a.m. to 1:30 p.m. Commuter passes for carpools and vanpools are issued by the Transportation Systems Management Program and shall be attached to a vehicle's rear-view mirror. Carpool and vanpool vehicles may park in other, unmarked areas.

No parking stalls onsite are assigned specifically to individuals. Functional group stalls may be designated when there is a compelling, demonstrated business need.

**Special Parking Permits.** These parking permits are issued as follows:

- Annual and temporary permits may be issued by the Director's Office to park nongovernment vehicles in government-designated spaces if there is a compelling business need to do so.
- Handicapped placards may be issued by HSD to employees with medical problems, allowing them to park temporarily in "blue" restricted parking areas for a maximum of 6 months. These placards are valid on Laboratory property only.
- A temporary permit may be issued to contractors, vendors, and service representatives who are required to transport materials or equipment other than that normally transported. The responsible LLNL contact requests these permits in writing through the Badge Office. This permit may be issued for up to 5 days.

Exceptions to these requirements may be made on the basis of demonstrated need or other considerations. However, all exceptions (for both employees and nonemployees) require approval of the Deputy Director for Operations.

**Service Vehicle Parking.** LLNL service vehicles may be parked adjacent to areas where maintenance, loading or unloading, or other service-oriented work is being performed. A yellow "LLNL Service Vehicle" sticker shall be placed on the windshield (on the driver's side) to identify these vehicles. Operators of service vehicles shall use designated stalls where available and observe safety and security parking restrictions. When a service vehicle is parked on the road or intruding into a driving lane, sidewalk or bike path orange safety cones or other warning signs shall be placed at both ends of the vehicle.

**Fire Lanes.** Proper access to all LLNL facilities is important to ensure a timely response to emergencies. Fire lanes have been established throughout the Laboratory so that the Fire Department can access buildings when responding to emergencies. Fire lanes are posted and shall be kept clear at all times. No vehicles are allowed to park in a fire lane under any circumstances. The Safeguards and Security Department will issue a traffic citation to any vehicle that is improperly parked in a designated fire lane.

### **3.8 Traffic Signs, Traffic Control Devices, and Markings**

All traffic signing and pavement striping, including painted parking restrictions and traffic messages, and bollards shall be reviewed and approved before installation by Space and Site Planning in Plant Engineering. Such signs and markings shall adhere to the requirements in ANSI D6.1, "Manual on Uniform Traffic Control Devices."

### **3.9 Bicycle Safety**

LLNL provides hundreds of bicycles for worker use onsite. In addition, many workers use privately owned bicycles onsite. Each year, workers are injured onsite while riding bicycles, but most of these injuries can be avoided by practicing safe riding habits.

Anyone who rides a bicycle at the LLNL Livermore site or at Site 300 is subject to the same traffic rules specified in the CVC for motor vehicle drivers.

Minors (i.e., individuals under 18 years of age) shall wear a bike helmet at all times while riding bicycles. Others are strongly encouraged to wear helmets.

In addition, bicycle riders shall

- Assess the condition of the bicycle before operating it to ensure that it is safe.
- Make sure bicycles have brakes that can make one wheel (the rear wheel, if there is only one brake) skid on dry, level, clean pavement.
- Ride bicycles as close to the right of the roadway as possible.
- Exercise care when passing a parked vehicle or one that is moving in the same direction.
- Use bike lanes whenever possible.
- Use conventional hand signals to signal their intent before turning.
- Observe all traffic control signs and use caution when crossing intersections.
- Ride as close as possible to the right side of pathways when passing oncoming pedestrians and alert them of your presence in a non-alarming fashion.
- Avoid riding bicycles in areas with uneven surfaces.
- Ride a bicycle in a safe manner at all times.

Bicycle riders shall not

- Be towed by another vehicle or allow a second person to ride on a bicycle designed for a single rider.

- Carry packages, bundles, or other articles that would prevent them from keeping at least one hand on the handlebars.
- Carry items in the basket that could slip through the wire webbing and catch in the bicycle wheel.
- Wear radio/cassette or CD headphones while riding a bicycle.
- Operate LLNL bicycles at night. Privately owned bicycles operated during darkness shall be equipped with the following:
  - A lamp emitting a white light which illuminates the road or path ahead and is visible from a distance of 300 feet to the front and the sides of the bicycle.
  - A red reflector mounted on the rear of the bicycle and visible from 500 feet to the rear of the bicycle.
  - A white or yellow reflector mounted on each pedal visible 200 feet to the front and rear of the bicycle and a white or red reflector on each side to the rear of the center of the bicycle, except bicycles which are equipped with reflectorized tires on the front and the rear need not be equipped with side reflectors. All reflectorized tires must meet DMV requirements.

LLNL bicycles that are not functional or safe to ride shall not be ridden. They shall be turned upside down in a traffic-free area for pickup by the Bicycle Maintenance Shop for repair. A courtesy note describing the problem should be attached. Do not attempt to operate a bicycle that has been turned upside down.

All bicycles should be parked in designated bike racks (or other locations), away from the line of traffic. LLNL bicycles are not to be taken into uncontrolled areas either onsite or offsite. LLNL bicycles shall not be brought into buildings or onto construction sites.

Privately owned bicycles may be parked inside buildings, at the discretion of the facility manager, provided they are restrained in such a manner that proper access and egress are maintained. Bicycles parked inside buildings are to be left behind during emergency evacuations.

### **3.10 Vehicle and Pedestrian Safety**

Pedestrians are subject to the provisions of the CVC. Pedestrians have the right-of-way at marked crosswalks and unmarked intersections but shall give way to vehicles at all other points on roadways. Pedestrians shall not move into the paths of moving vehicles so suddenly so as to create a hazard. Pedestrians should use caution before crossing a roadway, even where there is a marked crosswalk, and never assume that oncoming traffic will yield the right-of-way. Pedestrians should walk to the right side of pathways used by bicycle riders.

### 3.11 Onsite and Offsite Transfer of Hazardous Materials, Substances, or Wastes

Onsite transfer of hazardous materials, substances, or wastes shall be performed in accordance with the requirements in Document 21.2 and Document 21.1, "Acquisition, Receipt, Transportation, and Tracking of Hazardous Materials," in the *ES&H Manual*.

Offsite transfer of hazardous materials, substances, or wastes shall be performed in accordance with all applicable DOT regulatory requirements. For more information, contact the PATS Program Office. Vehicle operators shall exercise caution when approaching placarded vehicles.

### 3.12 Training

Table 1 specifies the training to be completed by professional drivers, employees, and contractors who use LLNL-controlled vehicles, and CDL holders and their payroll supervisors. Other specific training, licenses, or endorsements may be required for the operation of certain classes of motor vehicles and for the transport of regulated materials onsite and offsite. Refer to the CVC for details on specific vehicle operating requirements, or call the LLNL Traffic Office (of the Procurement & Materiel Department) to obtain the requirements for the offsite transport of regulated materials.

**Table 1. Training for motor vehicle operators and their supervisors.<sup>a</sup>**

Course/Description	Who
HS5600-CBT, Defensive Driving	Required for all professional drivers. Recommended for employees and contractors who use LLNL-controlled vehicles.
PA0005, Alcohol and Drug Testing for Commercial Driver's License Holders	Required for CDL holders. Recommended for the payroll supervisors of CDL holders.
PA0006, Alcohol and Drug Testing for Supervisors of Commercial Driver's License Holders	Required for the payroll supervisors of CDL holders.
ED7020-MCBT, Alcohol and Substance Abuse Prevention (ASAP) Education Program for Management	Required for the payroll supervisors of CDL holders.
HS5605, "Driving the Site 300 Fire Trails"	Required <sup>b</sup> by certain organizations for their employees and contractors who use Site 300 Fire Trails. Recommended for other personnel who use Site 300's fire trails

<sup>a</sup> Additional details are provided in the LLNL Course Catalog, available at: [https://www-ais.llnl.gov/llnl\\_only/docs/hr/catalog/](https://www-ais.llnl.gov/llnl_only/docs/hr/catalog/)

<sup>b</sup> As determined by the supervisor.

## 4.0 Off-Pavement Travel

This section specifies the minimum requirements for approved travel off paved roads. All workers shall follow these requirements when operating a vehicle (i.e., a government motor vehicle, privately owned vehicle, or rental vehicle) or other equipment whether on or off LLNL property for official laboratory business. (An off-pavement area is defined as one more than 50 ft from a paved roadway. Examples include remote areas and areas accessible only by fire trail or cross-country travel.) Off-pavement equipment is varied and defined in Appendix A.

Off-pavement travel can result in personal injury or property damage and involves hazards such as the following:

- Loss of vehicle control (e.g., because of inclement weather, driver error, or slippery conditions)
- Fire
- Wildlife hazards (e.g., rattlesnakes)
- Trips, falls, and vehicle accidents (including rollovers) caused by difficult terrain, road washouts, or loose soil

Destruction of protected species habitat, historic and prehistoric resources.

### 4.1 Work Authorization

Off-pavement travel is allowed only if:

- Required for authorized work.
- Authorized by the work supervisor.
- Performed within the scope of an approved Integration Work Sheet (IWS).

Off-pavement travel without prior authorization could result in disciplinary action. The Authorizing Organization is responsible for appropriate safety management as prescribed in the LLNL Integrated Safety Management (ISM) Program and the *ES&H Manual*.

### 4.2 Personnel Requirements

Traveling off road is defined as traveling on any unpaved road that is maintained as defined by the California Vehicle Code; to include fire trails, maintained dirt roads and driveways. LLNL employees traveling off pavement shall:

- Wear seat belts (when equipped) at all times when vehicles are in motion.

- Use vehicles and equipment that meet the needs of the work activity and travel conditions.
- Maintain an awareness of
  - Seasonal (e.g., weather-related) hazards associated with the off-pavement activity.
  - Controls to mitigate the hazards.
  - Actions necessary if a vehicle malfunctions or an emergency occurs.

Personnel traveling off-pavement shall have communication devices (e.g., two-way radios or cell phones) for each vehicle or group of workers. (Radios operating on the LLNL trunked radio system are required at Site 300). Workers who are to use the communication devices selected shall be knowledgeable of and familiar with the device. Vehicle operators should ensure that the selected communication device functions in the intended area of travel and is in good working order.

Local organizations (e.g., military command, other DOE sites) may require that the Responsible Individual be notified before and after off-pavement travel.

Additional requirements may apply depending on the scope of activity to be performed. Work supervisors and workers are responsible for being familiar with additional or area-specific requirements that may apply to the off-pavement activity.

Personnel traveling cross-country, defined as traveling upon open terrain, access roads and other paths that are not regularly maintained for vehicle or foot traffic, in addition to the controls for off-road travel shall:

- Wear closed-toed footwear with non-slip soles and ankle protection when traveling out side of the vehicle.
- Be aware of potential slip, trip or fall hazards in the work area and avoid walking in areas where excessive slip, trip or fall hazards exist.
- Have communication devices (e.g., two-way radios or cell phones) for each vehicle or group of workers. Workers who are to use the communication devices selected shall be knowledgeable of and familiar with the device. Vehicle operators should ensure that the selected communication device functions in the intended area of travel and is in good working order.

### **4.3 Off-Pavement Vehicles and Equipment**

Vehicles used for off-pavement travel include standard two-wheel-drive licensed vehicles, four-wheel-drive licensed vehicles, or all-terrain vehicles. Motorcycles and bicycles are not allowed for off-pavement travel by LLNL workers. Off-pavement equipment includes tractors, graders, and other apparatus used in traveling or

conducting work off pavement. The type of vehicle or equipment to use for off-pavement work shall be selected by the Responsible Individual in accordance with ISM principles and shall be addressed in the IWS for the work activity. Vehicle requirements are based on the type of work to be performed and the anticipated travel conditions.

For additional information about the subjects listed below, contact the organizations specified:

- Off-road use of any vehicle or equipment—ES&H Team industrial safety engineer or the facility point of contact for the area to be traveled
- Vehicles (i.e., cars, trucks, and forklifts)—Fleet Management Group
- Heavy equipment—Plant Engineering Labor Shop
- Cranes—Plant Engineering Rigger Shop

#### **4.4 Training**

Operators of motor vehicles used in off-pavement travel require a valid driver's license. In addition, the supervisor determines whether a vehicle operator needs to attend an off-pavement driver training course (e.g., HS5605, "Driving the Site 300 Fire Trails") depending on:

Location of off payment driving.

- The hazards involved.
- The likelihood of adverse weather conditions.
- Whether vehicle towing is involved.

An off-pavement driver training course:

- Includes performance-based training and testing in various field locations.
- Provides the necessary skills, knowledge, and ability for driving off pavement in most situations.
- Provides an understanding of the general hazards associated with off-pavement travel and the required controls.
- Needs to be taken only once when required by the supervisor for off-pavement driving. Hands-on retraining is provided at the discretion of the line management of the organization conducting the work activity.

Training for operators of off-road equipment (e.g., powered industrial trucks, tractors, graders, excavation equipment, bulldozers, or other earth-moving or construction equipment) includes completion of specialized, equipment-specific training required by the Responsible Individual or a Work Smart Standard, as applicable.

Additional equipment training is provided at the discretion of the Responsible Individual or as required by the IWS. However, all training completed shall be documented for all trained workers and for all equipment they are trained to operate. Documentation shall follow Document 40.1, "LLNL Training Program Manual," in the *ES&H Manual*.

#### **4.5 Off-Pavement Travel at Site 300**

Individuals who travel off pavement at Site 300 shall follow the requirements in the document *Restricted Off-Pavement Travel at Site 300* (see Section 7.1). The work supervisor is responsible for ensuring compliance with the requirements. The Responsible Individual for the activity is responsible for ensuring that appropriate approval is obtained before any activity requiring off-pavement travel is begun.

In addition to other requirements, personnel traveling off pavement shall have communication devices. Radios operating on the LLNL trunked radio system are required at Site 300 for each vehicle or group of workers. Workers who are to use the communication devices selected shall be knowledgeable of and familiar with the device. Vehicle operators should ensure that the selected communication device functions in the intended area of travel and is in good working order.

#### **4.6 Off-Pavement Travel at NonLLNL Locations**

The LLNL visiting organization (e.g., section, group, division, or department) shall contact the nonLLNL organization for approval before personnel perform any off-pavement travel. For example, visitors who are to travel off pavement at a military base shall only do so after obtaining, or having their sponsor obtain, permission from the appropriate authorities at the base.

## **5.0 Responsibilities**

All workers and organizations shall refer to Document 2.1, "Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management," in the *ES&H Manual* for a list of general responsibilities. This section describes specific responsibilities of LLNL organizations and workers who have key safety roles.

## 5.1 Drivers

Drivers are responsible for operating motor vehicles in a safe manner. Following an accident involving a vehicle used for Laboratory business, the driver shall:

- Stay at the scene of the accident unless medically required to leave.
- Notify his/her payroll supervisor (or Laboratory contact) of the incident. If the accident occurred offsite, the driver should cooperate with the local police and soon thereafter report the accident to his/her supervisor and the Protective Force Division. If the driver is unable to make a report, another employee who knows the details of the accident shall do so.
- Report any injuries to the Health Services Department, even if they are treated elsewhere.
- Report any accident to the Risk Management Office.
- Complete the Motor Vehicle Accident Report (GSA Form 91) for accidents involving GSA-leased vehicles and submit it to the Fleet Management Group within five working days. The GSA form and other instructions can be found in the glove compartment of each vehicle.
- Complete other reports or documentation as requested.

## 5.2 Bicyclists

Bicyclists are responsible for the safe operation of bicycles.

Following an accident involving a bicycle, the rider:

- Shall dial 911 or report to Health Services for treatment if an injury has occurred.
- Shall notify his/her payroll supervisor (or Laboratory contact) of the incident and complete reports or other documentation as needed.
- Should contact the Protective Force Division at 2-7222 if no injury has occurred.

## 5.3 Payroll Supervisors

Both the supervisors of Laboratory employees and Laboratory contacts for non-LLNL employees are responsible for:

- Ensuring appropriate disciplinary action is applied in accordance with Section 3.5.2 of this document.

- Making arrangements for individuals to be drug tested when they are in testing-designated positions and are involved in occurrences requiring immediate DOE notification to be drug tested. Contact the PATS Program Office for more information.
- Completing accident or injury reports as necessary and returning them to the appropriate Laboratory organization.

In addition, payroll supervisors shall ensure that CMV drivers involved in accidents while driving CMVs comply with controlled substance and alcohol testing requirements in 49 CFR 382 when:

- An accident results in a human fatality, or
- A citation for a moving violation is received, and medical treatment is received away from the scene, or
- An involved vehicle is towed from the scene.

Contact the PATS Program Office for further information.

### **5.3.1 Work Supervisors**

The Work Supervisor is responsible for:

- Ensuring that the required notifications of accidents, incidents, and/or occurrences are made to the appropriate Laboratory organizations.
- Contacting their directorate's assurance manager about serious accidents that may require an Occurrence Report.
- Analyzing the accident using the procedures described in Document 4.5.

### **5.4 Protective Force Division**

The Protective Force Division is responsible for:

- Coordinating the investigation of onsite traffic accidents involving vehicles on LLNL property.
- Requesting assistance from the California Highway Patrol, if necessary, for unusual circumstances associated with an incident.
- Completing, reviewing and distributing vehicle accident reports (CHP-555).
- Sending copies of traffic collision reports to Industrial Safety, the Laboratory Counsel, and the Fleet Management Group, and to the Supplemental Labor Office, if appropriate.

### **5.5 Fleet Management Group**

The Fleet Management Group is responsible for obtaining a repair estimate and for performing a safety inspection of damaged vehicles. The Fleet Management Group shall notify the Hazards Control Department in writing of monthly repair cost associated with government vehicles that are involved in accidents.

### **5.6 Safety Programs Division**

Safety Programs Division is responsible for:

- Coordinating vehicle accident reporting.
- Keeping management informed of the frequency of traffic accidents.
- Recommending appropriate management action. (See Document 4.6, "Incident Analysis Manual," in the *ES&H Manual* for further details.)
- Reviewing the accident report and preparing any additional reports that may be required.

### **5.7 LLNL Risk and Insurance Manager**

The LLNL Risk and Insurance Manager is responsible for handling liability claims and acting as liaison with the insurance carrier and the University Risk Management Office.

### **5.8 Health Services Department**

Health Services Department is responsible for:

- Providing health evaluation services in support of the Commercial Driver License application for LLNL employees.
- Providing health evaluation services for individuals who are experiencing medical conditions which temporarily limit physical activity, and to issue temporary handicapped parking placards to individuals as appropriate.

## **6.0 Work Standards**

Barrett, Dennis. *Onsite Packaging and Transportation Safety Standard*. Lawrence Livermore National Laboratory, Livermore, CA, UCRL-AR-130204.

California Vehicle Code.

DOE Order 440.1A, "Worker Protection Management for DOE Federal and Contractor Employees," Attachment 2, "Contractor Requirement Document," Sections 1–11, 13–18 (delete item 18.a), 19 (delete item 19.d.3), and 22.

29 CFR 1926, Subpart O, "Motor Vehicles, Mechanized Equipment, and Marine Operations, (1926.600-1926.606)."

49 CFR 382, "Controlled Substances and Alcohol Use and Testing."

49 CFR 100-199, "Research and Special Programs Administration, DOT (off-site)."

## **7.0 Resources for More Information**

### **7.1 Other Sources**

Lawrence Livermore National Laboratory, "Restricted Off-Pavement Travel at Site 300, " March 2001 (S300MGMT-11).

49 CFR (various parts), "Federal Motor Carrier Safety Regulation."

## Appendix A

### Acronyms, Terms, and Definitions

CDL	Commercial driver's license.
Commercial motor vehicle (CMV)	<p>Defined in 49 CFR 383.5 as a motor vehicle or combination of motor vehicles used in commerce to transport passengers or property and that includes at least one of the following:</p> <ol style="list-style-type: none"><li>1. A gross-combination-weight rating of 26,001 lb or more, including a towed unit with a gross-weight rating of more than 10,000 lb.</li><li>2. A gross-vehicle-weight rating of 26,001 lb or more.</li><li>3. A design to transport 16 or more passengers, including the driver.</li><li>4. Any size, used to transport materials found to be hazardous (for the purposes of the Hazardous Materials Transportation Act) and which requires that the motor vehicle be placarded under the Hazardous Materials Regulations (49 CFR 172, subpart F).</li></ol>
CMV	See "Commercial motor vehicle."
Cross-country travel	Traveling upon open terrain, access roads, and other paths that are not regularly maintained for vehicle or foot traffic.
CVC	California Vehicle Code.
DOT	Department of Transportation.
Equipment	In the context of vehicle operations and traffic, any equipment, vehicles, or transportation devices that are used in off-pavement travel. These can include 2-wheel drive, 4-wheel drive, all-terrain vehicles, tractors, graders, trucks, and passenger vehicles. Motorcycles and bicycles are not allowed for off-pavement travel by LLNL workers.
Guests	Non-LLNL personnel who are on LLNL property, e.g., a visitor, subcontractor, or summer student.
Off-pavement travel	Any travel that is more than 50 ft off a paved roadway.

Off-road travel	Traveling on any unpaved roads that are maintained as defined by the CVC to include fire trails, maintained dirt roads, and country driveways.
Professional driver	An employee or contractor who spends 50% or more of his or her time operating LLNL vehicles.
Travel	Hiking or using any vehicle or equipment for performing work activities off pavement.